

Fire Support in the Pusan Perimeter

**A Monograph
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ABSTRACT

FIRE SUPPORT IN THE PUSAN PERIMETER by MAJ John D. Dill, USA, 42 pages.

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This monograph asks if the fire support, including both artillery and air fires, provided to the Eighth Army Infantry and Armor units was effective. It also examines the reasons for the success or failures of fire support by contrasting the use of fire support by different Army and Marine Corps units as they defended the perimeter. Additionally, the monograph addresses the question of how the force development process shaped the success or failure of the Pusan fire support effort. Finally, the monograph discusses lessons from the Pusan defense that are applicable to current fire support and force development.

The monograph concludes that the fire support effort in the Pusan campaign was effective. However, because of the force reductions and training lapses that occurred after World War II in the United States Army and Air Force, it was not as effective as it could have been. The time taken to relearn the lessons of World War II and to rebuild units to doctrinal war time strength needlessly cost lives. The Pusan perimeter fight contains valuable lessons for current fire support leaders as they grapple with challenges similar to those faced by their predecessors in the summer of 1950.

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CHAPTER ONE

INTRODUCTION

Fire support has always played a critical role in America's wars. From the earliest days of the American revolution when Henry Knox's newly formed artillery regiment dragged captured British guns from Fort Ticonderoga to the heights above Boston and forced the British to abandon the city, Americans have understood the role of firepower in winning wars. As technology developed, the definition of fire support grew from cannons with lineage traced back to Henry Knox's muzzleloaders to encompass naval and air delivered fires as well. Today, Field Manual 101-5-1 defines fire support as

The collective and coordinated integration and synchronization of the fires and effects of armed aircraft, land-based and sea-based indirect fire systems, and electronic warfare systems that directly support combat forces against ground targets to delay, disrupt, destroy, divert, damage, and limit enemy forces, combat formations, and facilities in pursuit of operational and tactical objectives.¹

Clearly, fire support is an integral part of the American way of war.

In 1945, the United States emerged victorious from the largest war in history with the dominant combination of fire support doctrine, technology, material, and soldiers. From the invasion of Normandy on, the U.S. pummeled the German Army with massed artillery fires and close integration between the ground and air forces.² Five years later, the North Korean Peoples Army (NKPA) nearly defeated the United States. The Democratic Peoples Republic of Korea (DPRK) appeared from thirty-five years of colonial servitude to the Japanese in 1945 to challenge the most powerful nation on earth. Although the North Koreans received most of their arms from Communist Russia and China, the weapons and the technology dated from World War II. America had developed weapons that could effectively counter those in the hands of the enemy. However, most of these weapons were located in the United States, not with the units committed

¹ United States. Headquarters, Department of the Army Field Manual 101-5-1. (Washington, DC: 1997), 1-66

² Charlotte Knight, "Air War in Korea," *Air Force* (August 1950): 20

to fight from Japan. Thus, from August 5 until September 22 1950 American units, with their South Korean allies, teetered on the edge of destruction, defending a small perimeter centered on the port city of Pusan. This David and Goliath match up, by all conventional standards of national power, should have been an easy victory for the United States. What happened to the overwhelming American firepower that enabled the victories of World War II?

The story of fire support in the Pusan perimeter mirrors the overall story of American forces in the war. The decline of fire support began well before the Eighth Army was crowded precariously into the southwest corner of Korea. The seeds of disaster were sown during the general demobilization of the American military after World War II. These seeds were watered with the mistaken belief that the atomic bomb had removed the need for large conventional forces. According to the prevailing view in Washington, long range atomic bombing would handle all wars of the future. The Army's sole function was to function as a constabulary force.³ Post war military budgets reinforced this view as President Harry Truman, Secretary of Defense Louis Johnson, and Congress cut them beyond the minimum required to sustain a combat ready army.⁴ It is ironic that Truman, a former artilleryman, had such a ruinous effect on fire support.⁵

The net result of this philosophy and action was poor readiness. In the fire support area, it manifested itself most obviously in the decision to fill combat divisions in Japan to only two-thirds of their authorized strength in personnel and equipment. Most Field Artillery Battalions (FABs) manned and equipped only two firing batteries instead of the three called for by both tables of organization and doctrine.⁶ The deficiency also showed itself in other, subtler, though no less deadly, forms. Because of budget constraints, units were not able to conduct all the training that their wartime mission required. Thus, they had to prioritize their efforts. As few people believed that a major land war was on the horizon, commanders paid little attention to the

³ Clay Blair. *The Forgotten War: America in Korea 1950-53* (New York: Anchor Books, 1987), 9.

⁴ Ibid., 7-9

⁵ Ibid., 29

tasks involved in fighting one. Foremost in the litany of tasks untrained was close air support (CAS). CAS is currently defined as “air action by fixed- and rotary-wing aircraft against hostile targets which are in close proximity to friendly forces and which require detailed integration of each air mission with the fire and movement of those forces”.⁷ Air Force units in Japan, organized under the Far East Air Force, believed that their primary mission was the Air Defense of Japan, not CAS. U.S. Army units in Japan were likewise misinformed, believing that they were there solely as an occupation force. Both services discovered that this misperception would cost them dearly in 1950.

Events early in the war also shaped the battle for Pusan. When the North Koreans attacked on June 25, 1950, they quickly routed the South Korean Army. The Republic of Korea (ROK) forces were not ready for the armored onslaught on the North Koreans. The same poor intelligence and lack of strategic vision that hobbled the American Army had kept the South Korean Army from developing into an effective fighting force. Although in isolated instances the ROK soldiers were able to stem the tide, for the most part they fled to the south. Their army was ill equipped, ill led, and ill trained. Their 65,000 combat troops had no tanks, only 89 working howitzers, and no air support. Its senior officers were incompetent. Most importantly, it lacked any reasonable way (barring suicide attacks) of stopping a tank. In contrast, the North Koreans had a well armed, led, and trained army of 89,000 combat troops. It had 150 Russian made T-34 tanks, 122mm towed artillery along with 76 mm self propelled guns, and a 132 plane air force. Of these advantages, the most important one was the armor. The tanks, despite their WWII vintage, were unstoppable against the ROK forces and quickly terrified them. By June 28, only three days after the initial attack, the South Korean Capital of Seoul had fallen. Half the troops and 70% of the weapons in the ROK Army were destroyed, captured, or missing.⁸ Thus, the United States immediately faced a decision it had not expected or prepared to make. It was

⁶ Bevin Alexander. *Korea the First War We Lost* (New York: Hippocrene Books 1993), 47.

⁷ “Has the Air Force Done it's Job?” *Air Force* (March, 1951, Vol 34, No.3): 35

obvious that unless America aided the South Koreans, the country would fall to the communist North. President Truman ordered General of the Army Douglas MacArthur, in Japan, to assist in the defense of South Korea.

At the time, American arrogance assumed that all the United States needed to halt the North Korean attack was troops who would not run when they saw tanks. MacArthur immediately dispatched Task Force Smith, an infantry battalion with a battery of 105mm howitzers in direct support, to Korea to perform this task. The effort had a miserable beginning. Despite individual acts of bravery on July 5, especially among the artillerymen of A/52 FAB, Task Force Smith failed to stop or even significantly slow the North Korean drive south.⁹ The North Korean attack forced the artillerymen to abandon their guns. This pattern of ground engagement would continue throughout July 1950. The American forces would make a stand and the NKPA, by relying on the weight of their armor to punch through the U.S. lines or by flanking the Americans would continue to attack south. This calamity led to heavy American losses, fear of North Korean armor, and the development of “bug out fever”. Bugging out, slang for running away, became the predominant form of American maneuver leading up to the defense of the Pusan Perimeter. The artillery was not immune to this disease and the NKPA frequently captured howitzers left behind by their crews.

At the same time, the Far East Air Force (FEAF) was committed in support of South Korean troops. The effort also floundered. On July 3, the FEAF attacked several friendly areas. These targets included an ammunition train pulling into the station at Pyongtaek, the town of Suwon, and a ROK Army truck column. These early fratricides had a chilling effect on the relationship between the air and ground forces. Brigadier General John Church, the American Commander in Korea at the time, protested the FEAF’s attacks and asked that the Air Force limit all ground –air attacks to the area north of the Han River. This request would have resulted in no

⁸ Edwin P. Hoyt. *The Pusan Perimeter* (New York: Berkeley Publishing Company 1984) 4, 20.

ground to air attacks within 25 miles of the front line¹⁰. A ridiculous appeal, it illustrates the distrust and poor state of training with which the United States close air support effort began.

Thus by 3 August, little more than a month after the commitment of U.S. Forces, the American were pushed into a 100 mile by 50 mile box known as the Pusan perimeter. Up until this time, the U.S. fire support effort had been poor. Artillery batteries were vulnerable to enemy infiltration and encirclement. There was little coordination between the air and ground forces. Naval forces were steaming to combat area, but had not yet arrived in sufficient force to make a difference. This leads to the primary research question of this monograph: Did American fire support effectively assist maneuver forces defending the Pusan Perimeter in the early stages of the Korean War? To answer this question, several supporting questions must be resolved. These include: analyzing the Pusan perimeter engagements in terms of when, where, why, how was fire support effectively or ineffectively integrated into the defense. What factors hindered this effort? What factors aided it? Did different units have markedly different success with fire support?

1. Was field artillery effective in a direct support role? Was it effective in a general support role?

2. Was Air Force close air support effective? Was Navy/Marine close air support effective?

This historical examination examines how current doctrine accounts for, or fails to account for, the experiences and lessons learned at Pusan. The challenges posed by the enemy, geography, and mission in August of 1950 are very similar to those that faced by U.S. forces stationed on the peninsula today. What changes to current doctrine, training, leaders, organization, material, or soldiers should the U.S. make in order to help prevent any failures that might have occurred in the Pusan battle? Given the eventual success of the U.S. effort to defeat the NKPA, how well did fire support live up to its potential for shaping American victory?

⁹Donald L. Barnett, "Breechblocks Painted Bright Red Task Force Smith in Korea," *Field Artillery Journal* (July –August 1999): 34

TERRAIN AND TOOLS

When Major General Hobart Gay, Commanding General of the 1st Cavalry Division, ordered the bridges over the Nakdong River blown by the Eighth Army rear guard on August 3, 1950, he sealed to American and Korean forces into a box. The NKPA had chased these forces half way down the Korean peninsula in a war of movement. All that remained for the North Korean leader, Kim Il Sung, to cement his victory was to breach one more defensive line. Lieutenant General Walton Walker's Eighth Army was occupying the last natural defensible boundary between the enemy and the coast. Recent experience suggested that the odds were good that Kim's forces could breach this barrier without much difficulty.

The enclosure surrounding the Americans was a rectangle 50 miles wide from east to west by 100 miles deep from north to south. The decisive point in the area was the port of Pusan. Located on the southern edge of Korea, the port through which all Eighth Army's supply flowed was only 35 miles from the western edge of the frontline. Ocean surrounded two sides of the box. The Korea Straits separated it from Japan along the southern edge and the Sea of Japan provided the eastern boundary. The Nam River bordered the box on the southeast side and the Nakdong River completed the boundary on the north and west.¹¹ However, river was an illusory term in the summer of 1950. Both of these waterways had fallen in the hot, dry Korean summer and were fordable in many locations. The multiple ford locations reduced their value as choke points for interdiction by fires. The waterways were also susceptible to bridging. Although the Eighth Army destroyed all the existing bridges over the Nam and the Nakdong during the course of the fighting, the North Koreans were experts at building underwater bridges. These bridges distressed the defenders, as they were very difficult to detect, especially from the air, and hard to

¹⁰ Alexander, *Korea the First War We Lost*, 57-58

destroy. Even when allied forces wrecked one, the NKPA easily repaired it under the cover of darkness.

The enclosed terrain ranged from mountainous along the northeast side of the perimeter to steep ridges with deep valleys covered in rice paddies in the southeast. The hills' open fields of fire and, more important to the fire support effort, fields of observation, made them key terrain. The soldiers and Marines named many of the hills and several went down in history for the tactical engagements fought on and around them. Cloverleaf, Obong-ni, and the Bowling Alley were among the locations that changed hands repeatedly in the course of the perimeter defense. The hilltops also provided locations where small platoon and company sized elements could establish a small perimeter and call in artillery and air support to defeat NKPA infantry attacks.

In between the hills were rice paddies fertilized with human excrement. Temperatures frequently exceeded one hundred degrees, staggering American soldiers unused to heavy physical activity. This, combined with the steep sides of the ridges, posed a significant challenge for the Eighth Army and was an advantage for the acclimatized, tough North Korean troops. The paddies also compartmented the available level terrain. From the first deployment of U.S. artillery, this caused problems for battery commanders looking for positions large enough for their guns.¹² The net result was that commanders frequently positioned batteries with the gun sections divided by terrain, resulting in a poor defense against ground attack.

This compartmented, uneven terrain also complicated the air support effort. Initially, there was only one airstrip capable of handling a limited number of F-51 propeller planes. There were no runways capable of handling jets in friendly hands on the peninsula.¹³ Thus, the bulk of the FEAF's aircraft operated from bases in Japan 350 to 700 miles away from the frontline. The jets had a limited range, and the Japan to Korea distance meant that they could loiter for only 10

¹¹ Alexander, *Korea the First War We Lost*, 123

¹² Barnett, "Breechblocks Painted Bright Red Task Force Smith in Korea", 33

¹³ Robert Jackson, *Air War Over Korea*. (New York: Scribners, 1973), 26

to 15 minutes over the battlefield.¹⁴ Therefore, a pilot had to have a reasonably good idea of where the target was before he took off. During the defense of the perimeter, locally manufactured wingtip tanks were added to the jets in Japan. This added 30-45 minutes to their loiter time and eased the requirement for preplanned versus opportunity targets.

The ultimate effect of geography was the distance across the Pacific and the relative length of the forces' supply lines. The NKPA was supplied over rail and roads, albeit poor ones, from North Korea, and from contiguous China and the Soviet Union. These supply lines, initially an advantage for the North, gradually became liabilities as the American air interdiction effort made using them, especially in daylight, extremely hazardous. Although recovering Japanese industry could assist the effort, most of Eighth Army's supplies came directly over sea-lanes from the U.S., a distance of over twenty sailing days. The Communists never attacked these sea lines of communication. Once established, they provided a steady flow of reinforcement and supply. However, the question in August 1950 was whether the U.S. could establish them quickly enough to turn the tide of NKPA successes? As an example the limits imposed by this time delay, fire support suffered as it took a month for the U.S. to ship additional propeller driven F-51s to Korea via aircraft carrier. These planes came on line in the middle of August 1950 and carried the burden of close air support throughout the defense.¹⁵ Interestingly, pilots originally based in Japan to fly air to air combat in high technology jets retrained and flew these low technology ground support aircraft.

The material available to the attackers and the defenders significantly affected the outcome of the fight. At the start of the war, North Korea held an overwhelming firepower advantage over the South Koreans and Americans armies. Each of the North Korean Infantry Divisions was equipped with twelve 122mm howitzers, twenty-four towed 76mm guns, and twelve self-propelled 76mm self-propelled guns (with a range of 8500 meters), totaling forty-

¹⁴ Knight, "Air War in Korea," 34

eight artillery pieces for the division. In addition, each regiment had six 120mm mortars, and four 76mm howitzers. Battalions and companies also had additional 82 mm and 61mm mortars. However, the NKPA could not easily replace these weapons or their trained crews as the defenders destroyed them. Thus, logistical culmination limited the ability of the North Korean artillery to shape the attack along the Nakdong. What influence it did have was increasingly limited to mortar fire. Similarly, the North Korean Air Force started the war with modern planes capable of ground attack. However, by the time the NKPA was attacking across the Nakdong, the U.S. Air Force had destroyed virtually all the communist planes either through air to air combat or by bombing the DPRK's airfields.

The United Nations side, in contrast, began the war from a position of inferiority. However, by the time the perimeter was established, they held an overwhelming firepower advantage.¹⁵ The basic artillery weapon for the U.S. divisions was the M2 105mm howitzer (range: 11,430 meters). There were also a number of M114 155mm howitzer (range: 16,459 meters) field artillery battalions shooting in support of the defenders. Finally, one M1 eight-inch howitzer (range: 11,430 meters) battalion deployed from the U.S. At the start of the war, the American artillery was manned and equipped at about two-thirds strength. However, MacArthur made artillery reinforcement a priority. Thus, during July, the Joint Chiefs stripped the continental U.S. forces in order to assemble and ship eleven 105mm batteries to reinforce the Division Artilleries (DivArty). By plugging in these reinforcements and dissolving one battalion, Walker equipped his divisions to near doctrinal levels of artillery. Each infantry regiment during the Pusan fight usually had at least one battalion of 105mm howitzers in direct support supplementing its organic mortars. In addition, MacArthur requested fifteen additional battalions to serve as non-divisional artillery. The barrel was empty, however, in the continental United

¹⁵ Jackson, *Air War over Korea*, 30

¹⁶ Alexander, *Korea the First War We Lost*, 124

States and he only received three 155mm howitzer battalions and the one eight inch battalion.¹⁷ These battalions were welcomed as general support in the heaviest battles along the perimeter and greatly reinforced the power of the 105mm battalions. Artillery ammunition consisted of high explosive, illumination, or white phosphorus rounds with point detonating or variable time fuses. The Americans completely outclassed the NKPA in Field Artillery by the beginning of August 1950. The situation continued to improve through the month as reinforcements flowed into Pusan.

Despite the heavy American advantage in artillery, the greatest gap between the combatant's capabilities occurred in the air. The U.S. Air Force (USAF) decimated their North Korean counterparts within the first few days of combat. This allowed the American airpower component of fire support to focus its weight on the ground with little concern about an enemy air threat.¹⁸ Thus, limitations and inefficiencies in this area were solely the result of American action. The air component was composed of elements from the USAF, United States Navy (USN), and United States Marine Corps (USMC). Each of these services brought different airplanes to the fight; planes that reflected their organizations' post WWII focus and mission.

The USAF, which flew the preponderance of the sorties in the Pusan Campaign, was initially equipped for air-to-air combat¹⁹. As previously mentioned, the distance from the airfields to the battlefield limited jet aircraft. These aircraft included the F-80C Shooting Star Interceptor, the F-82 Twin Mustang fighter, and the RF-80A photo-reconnaissance aircraft. There were also three veteran propeller driven aircraft types from WWII used – the F-51 Mustang, the B-26 Tactical Light Bomber, and the B-29 Medium bomber.²⁰ The U.S. and British navies also operated both jet and propeller driven aircraft from carriers off the coast of Korea. These aircraft included the American Panther jet fighter, Skyraider, F4U Corsair, and British Fireflies and

¹⁷ Boyd L. Dastrup *The Field Artillery: History and Sourcebook* (Westport, Connecticut: Greenwood Press 1994) 254

¹⁸ "Has the Air Force Done it's Job?": 35

¹⁹ Ibid. 35

Seafires.²¹ The USMC, like the Navy, operated Corsairs. Two of their units flew planes identical to the Navy, while one was equipped for night operations. When they deployed to Korea, the Marines also brought with them helicopters and spotter aircraft. Along with their equipment, the USMC also brought the highest level of pre-war joint ground-air training of any United Nations unit.²² Their ground –air operations quickly became the envy of many army units.

The air element had a wide variety of weapons available for use. These included napalm, five inch and six and a half inch rockets, bombs, and machine guns. The rockets were most effective against tanks while the bombs and machine guns were primarily anti personnel weapons in the close fight. Napalm, the Air Force discovered, was highly effective against not only personnel but also tanks as it burned the rubber off the boogie wheels and the insulation off the wires of the electrical system.²³

Chapter 3

APPLYING THE TOOLS

The U.S. forces available to Walker by early August 1950 included three U.S. Army divisions (the 1st Cavalry, 24th, and 25th Infantry Divisions), a separate U.S. Army Regimental Combat Team (RCT) (the 5th), and a Marine Brigade (the 1st Marine Provisional Brigade, composed of the 5th Marine Regiment and 33^d Marine Air Group). The U.S. Army 2^d Infantry Division was closing fast and arrived in the second week of August. These forces provided the bulk of the American ground effort in the battle. Their quality was uneven. The enemy had battered the 24th and 25th Infantry Divisions in the previous month's fighting. The 24th Infantry Division's four artillery battalions were particular weak.²⁴ However, the artillery reinforcement

²⁰ Jackson, *Air War over Korea*, 10

²¹ Ibid. 26

²² Charles Docker, "Marine Air Over Korea", *Marine Corps Gazette*, (December 1985): 40

²³ "Has the Air Force Done it's Job?": 43

²⁴ Blair. *The Forgotten War: America in Korea 1950-53*. 199, 221

continued throughout the month. By midmonth there were twenty field artillery battalions available with 360 howitzers. Walker arrayed his units in a half circle facing the NKPA across the Nakdong River with the ocean on their left flank and the ROK army on their right. With these actions and reinforcements, he set the conditions for what Bevin Alexander perceived as

...A continuous front...the familiar, routine, and safe tactical method employed by the American army where ever possible in World War II (and before), and provided[ing] the very essence of the kind of security which American troops had come to depend on.

Americans excelled at this kind of war, in which the American preponderance in artillery, air power, and heavy firepower of all kinds was employed to its maximum. Americans always have been outstanding in swapping high expenditures of ammunition and bombs for casualties. In these circumstances, they stand like rocks.²⁵

However, these Eighth Army “rocks” were still facing an enemy that had flowed around them like a rising tide. Walker’s first move to stem this tide was to commit the 25th Infantry Division, the 5th RCT, and the 1st Marine Brigade in an attack in the southwest corner of the perimeter. Here the Nakdong River curves in to the east, closing to within five miles of Pusan before emptying into the sea. The smaller Nam River provides some natural protection but it was here that Walker perceived the greatest threat from the NKPA and here that he began his defense with a limited offense. The attack began on August 7th, under the command of Major General Kean, the Commanding General of the 25th Infantry Division. Its objective was the destruction of the North Korean 6th Division and the town of Chinju. Eighth Army intelligence estimated that the enemy forces consisted of 7500 men with 36 artillery pieces and 25 tanks.²⁶ Task Force Kean had three Army regiments with their supporting artillery and mortars, plus the Marine Brigade with its organic guns and air support. In addition, USN and USAF air support contributed two aircraft carriers and several hundred land based planes. However, naval gunfire support was concentrated on the East coast in support of ROK army units and on interdiction of coastal lines of communication from the north.

²⁵ Alexander, *Korea the First War We Lost*, 122

The attack immediately ran into difficulty. The enemy 6th Division was simultaneously attacking to try to seize Pusan. On the night preceding the American movement, North Korean troops seized Hill 342, subsequently renamed Fox Hill, from a platoon of the 5th RCT. From this height they could observe the Headquarters of the both 5th RCT and the Marine Regiment, the artillery emplacements, and the main supply route. Thus the American ground elements found themselves fighting well forward of their planned line of departure. The army discovered additional North Korean emplacements on Hill 255, two miles further east behind U.S. lines than Fox Hill. It took both soldiers and Marines two days and over 2000 rounds of artillery ammunition to clear these obstructions. Fog hindered the CAS effort. Thus, the attack did not advance towards its original objectives until August 9th – two days after its originally scheduled start.²⁷

Once the attack moved forward, there were moments of brilliance and tragedy in the fire support arena. The Marines utilized their well-trained, frequently exercised close air support system. The proximity of the battlefield to the ocean and absence of enemy air or naval threats allowed the carriers bearing the Marine Air Group to maneuver very close to the action. As a result, the Marine advance constantly had Corsairs overhead. Originally designed to replace the artillery during the early stages of an amphibious operation, this system was extremely responsive. It included organic forward air observers with the ground forces. For the advance towards Chinju, this meant that Marine air power attacked enemy target within minutes of their discovery.²⁸ The ability of air power to operate in three dimensions and attack targets on top of hills was critical. It removed the weather-imposed requirement of August 7th and 8th for Marines to climb the hills in order to spot for the artillery or, in the worst cases, to engage the enemy in a direct firefight. With the coastal route to Chinju paved with high explosives, the Marines

²⁶ Roy E. Appleman *South to the Naktong North to the Yalu* (Washington, DC: U.S. Government Printing Office 1961): 269-270

²⁷ Alexander, *Korea the First War We Lost*, 128

advanced rapidly until they neared the intermediate objective of the town of Kosong. There a synergistic effect between the Marine direct support artillery from the 1st Battalion, 11th Field Artillery Regiment and the USMC Corsairs from the USS *Badoeng Straits* and USS *Sicily* provided the most effective engagement of the attack. The artillery, while adjusting fire, happened to place some rounds near the NKPA 83d Motorized Regiment. The regiment, intended as a reinforcements for the 6th North Korean Division, fled along the road to Chinju in a long motorized column. Because of the near constant air support overhead, it was attacked immediately. The pilots machine-gunned the line of vehicles. Two more flights, one of Marine Corsairs, and one of Air Force F-51s, flew to the area to attack and complete the decimation of the regiment. The planes caused approximately 200 casualties and wrecked over a hundred vehicles²⁹. During the attack, the North Koreans damaged two Corsairs with small arms fire and forced them to crash land behind enemy lines. The impact killed one pilot, but the commander of the Marine Brigade, Brigadier General Craig, picked up the other with the helicopter from which he was following the fight. Despite incurring the first casualty for the Marine Air Wing, this engagement was a superb example of the havoc the combined efforts of ground forces, direct support artillery, and close air support could wreck on the enemy³⁰. This effect was primarily due to the integration of the three elements under one commander as espoused and practiced in Marine Corps doctrine.

Along the main axis of advance, things were not going as well for the Army in general and for fire support in particular. The 5th RCT was responsible for the center of the TF Kean advance. Closely following the infantry and armor were three artillery battalions. These units included the 5th RCT's direct support battalion, the 555th FAB (105mm), and two other units – the 159th FAB (105mm) from the 25th DivArty and the reinforcing 90th FAB (155mm). The 5th RCT

²⁸ Appleman *South to the Naktong North to the Yalu*: 275

²⁹ Ibid.

³⁰ Docker, "Marine Air Over Korea": 41

did not have the closely coordinated CAS available to the Marine Regiment, but it did have Air Force and Naval Air Support available.

As the assault moved westward, the infantry and armor forces attacked over a pass west of the village of Pogam-ni on the road to Chinju. The artillery emplaced near the village and supported the attack. The attack was a success, and all the RCT's combat power moved over the pass to the west. This included the armor platoon originally tasked to protect the artillery. As the RCT's supply trains and artillery moved to follow, a tremendous traffic jam blocked the narrow road on the night of August 12th.

Unfortunately, a massive, rugged mountainous area known as Sobuk-san bisected the 5th RCT's sector from north to south. The Americans, focused on the roads needed for vehicle mobility, were convinced that there were no enemy forces in the area. They were wrong. NKPA tanks and anti tank guns, accompanied by infantry, infiltrated out of the hills surrounding Sobuk-san and attacked all three artillery battalions. Losses were tremendous. The 555th FAB lost all its vehicles and howitzers in two batteries and suffered 160 casualties. The 90th FAB lost 28 vehicles, all six of A Battery's howitzers and received approximately 100 casualties across the battalion. B Battery of the 159th FAB was attacked in lesser strength, and lost only a few ammunition and fuel trucks. Naval Aviation tried to fly close support missions in to blunt the enemy attack, but was unable to make radio contact with the soldiers on the ground, limiting their effectiveness. Infantry units rushed to the scene of the disaster, but it was too late. Underscoring the brutality of the action, five weeks later U.S. forces discovered twenty cannoneers from the 90th FAB, all shot through the head.³¹

After this attack, the 5th RCT continued to move to the west. It linked with the 35th Infantry Regiment and advanced with little opposition to hills overlooking the objective, Chinju. However, the enemy continued to hold the Sobuk-san area and constantly severed the supply

³¹ Appleman *South to the Naktong North to the Yalu*: 287

lines. This, in combination with pressing needs elsewhere on the perimeter, forced Walker to withdraw TF Kean to locations near its original lines.

The action around Pongam-ni demonstrated the importance of protecting the artillery. The communists realized that American firepower could hurt them badly. Unable to affect the carriers or airfields, they made closing with and destroying the artillery a high priority target. Without infantry or armor forces close by, the artillery was very vulnerable to these attacks. Until U.S. commanders learned this lesson, they consistently risked throwing away one of their primary advantages – the only all weather, day/night capable firepower system in the Eighth Army. Luckily for the Americans, they were able to replace their losses from the ever-increasing influx of equipment arriving in Korea. Within four days of the disaster, Eighth Army had replaced the 555th and 90th FABs' equipment by diverting howitzers originally intended for ROK units and by slowing the expansion of the 90th FAB to a fully equipped three battery battalion. It was an expensive lesson in force protection.

The threat to the perimeter that caused TF Kean's withdrawal was an attack by the NKPA 4th Division. This attack actually began as TF Kean was advancing, but the Eighth Army did not realize its seriousness for several days. The penetration, located in the in the 24th Infantry Division's sector, occurred where a curve in the Nakdong River created a salient into the North Korean held sector. By mid August, the NKPA had crossed the Nakdong and seized three ridges running from north to south – Ohang, Cloverleaf, and Obong-ni. These ridges blocked access to the salient and prevented the Americans from observing the river crossing sites. The enemy also continued their focus on attacking unprotected American artillery. The North Koreans assaulted B Battery, 13th FAB early on the morning of August 6th. While the battery did not receive casualties similar to those suffered by the 555th FAB, it withdrew and abandoned five of its six howitzers.

The fight to plug the hole in the line around Pusan centered on retaking this terrain known as the Nakdong Bulge. The 24th Division initially attempted to counter attack, but was not

strong enough to accomplish the requirement. Task Force Hill, led by Colonel John Hill and built around the 9th and 34th Infantry Regiments, attempted to push the Koreans off Cloverleaf. Although the 24th Division planned fire support for the attack, it was ineffective. Weather forced the cancellation of planned air strikes, and the 24th DivArty could only muster thirty tubes of artillery for a ten-minute preparation on the ridges. Despite not setting the conditions for success, the infantry attacked. Although the soldiers closed to hand grenade range, the attack failed to kick the NKPA 4th Division off the hill.

Only when the fought out 24th Infantry Division failed to force the Koreans back across the river, and the entire enemy 4th Division was across, did Walker shift his resources to handle the threat.³² He tasked the Marine Brigade to come to the rescue, placing them under Major General Church, the 24th Infantry Division Commanding General. The Marines withdrew from TF Kean and both the 5th Marine Regiment and the carriers carrying the 33d Wing repositioned to attack the bulge. The 5th Regiment arrived slightly before the air component was ready to go into action, but the Marines convinced Church to delay the attack until both the USS *Badoeng Straits* and USS *Sicily* were ready to support the effort.³³ This was a wise decision. By 17 August, Church had three Army and one Marine regiment, three battalions of 105mm howitzers, a battalion of 155mm howitzers, and the Marine Corsairs prepared for the offensive.

The Marines led the attack, focusing on Obong-ni. The fire support effort consisted of 18 Corsairs that pounded the top of the hill. However, the artillery portion of the preparation was ineffective³⁴. The net result was that North Koreans in reverse slope foxholes survived the air attack and caused 142 casualties in the lead battalion. It fell back and another battalion of Marines assaulted the hill around 1600. This time the Marines coordinated with the 24th Infantry Division's 9th Regiment attack on Cloverleaf. Additionally, the 24th DivArty massed artillery in

³² Hoyt. *The Pusan Perimeter*: 153

³³ Alexander. *Korea the First War We Lost*: 138

³⁴ William G. Robertson *Counterattack on the Naktong* (Combat Studies Institute, Fort Leavenworth, Kansas, Washington, DC: U.S. Government Printing Office December 1985: 89

support of the 9th Infantry. The guns used air-bursting fuses that caused shrapnel to penetrate deep into North Korean foxholes, killing or demoralizing nearly all the defenders. The Marines, this time protected from enfilading fire from Cloverleaf, gained the top of Obong-ni ridge. The next morning, after fighting off a night counterattack, they secured the ridge and broke the enemy with pinpoint assistance from the Corsairs. As the enemy 4th Division ran for the banks of the Nakdong, they presented an ideal target for American firepower. As Edwin Hoyt described the scene:

Suddenly, from the reverse slope of Hill 207, hundreds of North Koreans began a panic-stricken flight to reach the Nakdong and cross. The Marine plane overhead found scores of targets. They knocked out the command post of the North Korean 18th regiment and made one strafing run after another along the banks of the river until observers swore that the Nakdong River that day ran red with blood. The artillerymen behind the Marines zeroed in on the approaches to the river and destroyed whole concentrations of troops. By 10 o' clock that morning the Marine attack had ceased to be fight. It was not even a rout of the enemy, it was a slaughter.³⁵

The NKPA 4th Division, the same division that destroyed Task Force Smith, disappeared as a combat effective unit. The combined effects of ground, artillery, and air power had provided a decisive victory over one of the DPRK's best units. The Americans, led by the Marines, were re-learning the lessons of World War II about the powerful effects of synergy between combat elements. By integrating the three into a tightly controlled effort, the U.S. presented the North Koreans with an overmatch that they could not stand up to. It took all three elements, acting in concert, to do this and it provided a striking contrast to the results of only a few weeks earlier when communists pushed the 24th Infantry Division southward at will. This victory marked a turning point in not only the battle for the perimeter, but also for the resurrection of American combat techniques.³⁶

The 1st Cavalry Division also demonstrated these techniques in their sector. At the same time that the North Koreans were attacking into the Nakdong Bulge, they also tried to penetrate

³⁵ Hoyt. *The Pusan Perimeter*: 162

across the Nakdong near Taegu. Here the Americans, not worn and bloodied from July's retreats, held the North Korean 10th and 3^d Divisions to a much smaller gain than that initially gained by the 4th. Fire support, despite widely dispersed artillery batteries, played a key role as Major General Gay, the 1st Cavalry Division Commander, integrated it into the defensive plan from the beginning.

The battle began before dawn on August 9th. All three regiments of the NKPA 3^d Division began fording at a point where the Nakdong was only five feet deep. Although the first unit crossed with light casualties, the 5th Cavalry Regiment caught the next two in a crossfire of both direct and indirect fires. The enemy casualties were tremendous. Although the enemy was able to get approximately one thousand troops across the Nakdong, they were not able to present the level of threat that occurred in the Bulge. They seized the rise known as Triangulation Hill immediately on the east bank of the river, but that was all. After the sun came up, the 61st FAB began firing on the hill and Gay committed his reserve battalion to the fight³⁷. It took the 1st Battalion, 7th Cavalry only two days to destroy the pocket. On the 9th, the battalion attacked at noon and was repulsed, partly due to heat casualties. However, on the 10th, artillery and air strikes pounded the hill and killed between 30-40 percent of the enemy. The 1-7 Cav seized the hill at the cost of 14 killed and 48 wounded. As the enemy retreated, the 63d FAB fired white phosphorus rounds into a village, kindling it and killing another 200 North Koreans. Between the casualties inflicted in the crossing effort, and those imposed during the counterattack, the 1st Cavalry Division destroyed the NKPA's 3^d Division. Unlike the costly, time consuming effort by the 24th Division, the 1st Cav's effort quickly demolished the NKPA offense without relying on outside assistance. The fire support effort was the key to victory as it decimated enemy regiments, smoothing the path for the infantry to follow.

³⁶ Blair. *The Forgotten War: America in Korea 1950-53*

³⁷ Appleman. *South to the Nakdong North to the Yalu*: 340

Luckily for the Americans, the North Koreans were having great difficulty adapting to this new form of war. Failing to learn the lessons paid for with the blood of the 3^d Division, the 10th Division attacked in a similar manner with similar results. In one change, the North Koreans lined up tanks and artillery on the west bank of the river to support the infantry. This concentration of infantry and its support force suffered heavy casualties, most inflicted by indirect fire and air strikes. The NKPA provided such lucrative targets that the 77th FAB, supporting the defense, wore out the gun barrels of its howitzers.³⁸

Another case illustrating the change in U.S. capabilities occurred after the North Koreans crossed the river and seized a hill near Waegwan on the boundary between the U.S. and ROK armies. Artillery and air strikes scoured the hill with strafing runs, high explosive, rockets, and napalm. When soldiers from the 5th Cavalry regiment attacked unopposed, they found over 200 bodies and estimated that another 300 wounded and other survivors had fled across the shallow Nakdong River.

Despite successes like these, this sector was the scene of the most wasteful use of firepower in the course of the perimeter defense. Despite the 1st Cavalry Division's success in blocking enemy advances, the ROK forces on their right flank were slowly losing ground. From his headquarters in Tokyo, MacArthur was convinced that a large concentration of enemy troops was located west of the juncture between the American and Korean units. He decided that the best way to deal with the perceived threat was carpet-bombing from strategic bombers in an attempt to replicate Operation Cobra, the attack preceding the allied breakout in Normandy. This meant pulling B-29s that had been flying very successful strategic and air interdiction strikes away from targets in North Korea. The FEAF reluctantly retargeted them into a rectangle three and a half miles wide by seven and a half miles long just west of the Nakdong.³⁹

³⁸ Alexander, *Korea the First War We Lost*: 142

³⁹ Jackson, *Air War Over Korea*: 39

Thus, on August 16th all 98 B-29 bombers in theater dropped over four thousand bombs into the strike zone. The action required only twenty-six minutes as 1,692,000 pounds of bombs, the equivalent of 30,000 artillery rounds, fell. The results, obtained through aerial reconnaissance and POW interrogations, were negligible. There was no concentration of enemy soldiers in the target area and the heavy bomber strike apparently killed zero enemy soldiers. General George Stratemeyer, commander of the Far East Air Force, convinced MacArthur to call off a second strike planned for August 19th. The B-29s went back to their originally scheduled program of interdicting the Communist supply lines, and smaller planes handled the close air support effort for the rest of the campaign.

The ineffective carpet-bombing left the ROK army still facing heavy pressure from their North Korean opponents. Walker decided to commit two of his best units to assist in the defense north of Taegu – the 27th and 23^d Infantry Regiments. However, in contrast to the thin line of defensive positions established around the Naktong Bulge, the U.S. forces established a robust defense in depth. Overlooking a long valley running from north to south, the 27th Infantry “Wolfhounds”, commanded by Colonel Mike Michaelis, set up an integrated blocking position complete with minefields, interlocking fires, and pre-registered artillery targets. This valley would become famous as “The Bowling Alley”, named for the rumble of explosions that echoed along its walls for the next ten days and nights. Walker tasked the 23d Infantry Regiment, under Colonel Paul Freeman to dig in behind the Wolfhounds in order to not only strengthen the defense of the route to Taegu, but also to protect the supporting 37th and 8th FABs. The U.S. commanders were learning the lessons paid for by the 555th, 90th, and 13th FABs of TF Kean.

The North Korean attacks fell into a pattern that allowed the U.S. force to maximize its strengths. The ROK Army units in the mountains bordering the valley prevented the enemy from flanking the Americans on the valley floor. This forced the NKPA to attack straight down the road. They attempted to use the cover of darkness and saved their heaviest assaults for night. However, the well-planned and integrated defense thwarted them. The American ability to shoot

illumination rounds and drop aerial flares turned the night into day throughout the contest for the road. Addison Terry, an Artillery Lieutenant attached to the 27th Infantry Regiment as a forward observer, described the effect of illumination and high explosive rounds on a NKPA attack the night of August 21st.

The round whooshed above us and burst high over the valley a thousand yards out. There was a splendid silver spray of light and as the parachute opened and the flare burned to maximum efficiency, the entire valley was illuminated.

I stared below, shocked and frightened. There were tanks and self-propelled guns cluttering the road, bumper-to-bumper, scrambling towards our positions. Around these armored pieces were hundreds of NKPA infantrymen. I grabbed the phone and screamed for a fire mission... I hoped that the batteries were registered as I had been told they were because there was no time for an adjustment now...The recoilless rifles that were emplaced all along the hills on both sides of the road were slicing into the enemy and taking their toll, and backflashes down close betrayed the presence of bazooka teams. Our tanks had rolled up to point blank range from their place of concealment behind a little rise. The Pershings opened up with their big guns, and their .50s and heavy .30s were cutting across the valley in a withering crossfire. The barrage of mortars was now accelerated to a deafening roar, and the bursting rounds were falling like water being poured out of a pitcher. Here was U.S. firepower at its best. We were cutting them to pieces.⁴⁰

The Americans scorched the North Koreans with fire. As a measure of the size of this inferno during the fight described above, a single 105mm battery of the 8th FAB fired 1661 rounds, the 2^d Battalion, 27th Infantry's 4.2 Inch mortar platoon fired 902 rounds, the 81mm mortar platoon fired 1200 rounds and F Company's 60mm mortars fired 385 rounds. Enemy prisoners reported that their units suffered 75% casualties.⁴¹ Daylight brought no relief to the 13th North Korean Division. The increasingly effective Army-Air Force links ensured that the air support attacked the North Koreans right up to the U.S. lines. The air support was so close that .50 caliber shell casings were bouncing off the helmets of the troops on the ground.⁴²

The Bowling Alley fight also saw an unusual incident that illustrated the relative state of the opposing fire support systems. Lieutenant Colonel Chong Pong, Commander of the North

⁴⁰ Addison Terry *The Battle for Pusan: a Korean War Memoir* (Novato, CA: Presidio Press Inc.): 2000: 172-173.

⁴¹ Appleman. *South to the Naktong North to the Yalu*: 340

Korean 13th Division Artillery, surrendered to 27th Infantry Regiment soldiers. He claimed to be upset because he was passed over to promotion. The defector offered to show the U.S. forces where his guns were located. His intelligence was accurate and air strikes destroyed most of the 13th Division's remaining artillery.⁴³ The American fire support system was growing in confidence, ability, and resources. The NKPA's was headed in the opposite direction.

Despite the U.S. Army's overwhelming firepower advantage, the North Koreans were able to infiltrate a regiment through the mountains, overrunning the ROK soldiers defending the high ground. Once behind the American frontline, they attempted to destroy the artillery support by assaulting it from the ridge overlooking it. However, instead of scattered battery positions, the enemy ran into the 23^d Infantry Regiment. The 23^d repulsed the initial strike and destroyed the regiment. In this task, they had significant assistance from the FEAF, including attacks by Air Force, Navy, and Australian airpower. This culminated in a raid by B-26s that dropped 44,000 pounds of ordnance on the enemy.⁴⁴ Shortly after this action, Walker realized that the Bowling Alley defense had ended the immediate threat on the northern road to Taegu. The 27th Infantry, as one of the "fire brigades" used for putting out hot spots of enemy action, received little rest. Officially, they became the Eighth Army Reserve. In fact, their reward was the decision by Walker to deploy them to the threatened area of Pusan where TF Kean had fought only two weeks earlier and where the strongest portion of the NKPA was again located.

Thus as August ended, the Eighth Army had managed to hold onto the defensible territory surrounding Pusan. This effort was underwritten by ever increasing use of firepower, both artillery and air delivered. It allowed MacArthur in Japan to plan the Inchon landing in the rear of the North Korean Peoples Army. As long as Eighth Army held, the enemy could not disperse to protect the conquered territory. The DPRK high command realized this and rushed

⁴² John F. Loosbrock "Gen. Mike Likes Air Power" Air Force (June, 1951): 34

⁴³ Terry. *The Battle for Pusan*: 187

every reinforcement they had south to participate in an all out assault along the whole length of the perimeter. Kim Il Sung ordered his forces to begin a general assault on August 31st. This offensive covered familiar ground including the area west of Pusan, the Naktong Bulge, and the corridor north of Taegu. By simultaneously assaulting on a broad front, the NKPA probably eclipsed their chance of capturing Pusan. This wide offensive engaged every unit in the Eighth Army, but failed to mass at any point and punch a wide hole in their lines. Although it was difficult to discern during the fighting, all the North Korean gains were temporary.

The U.S. forces continued to use high explosive to inflict tremendous losses on the strongly motivated North Korean attacks. Typical of these battles was the one fought by the 2nd Infantry Division's 35th Infantry Regiment along the Nam River. Positioned on the hills on the East bank, the 35th's units held the summits while North Korean Infantry swarmed through the valleys below them. Holding the high ground gave the Americans good observation points from which they were able to direct artillery and air strikes onto the enemy. In one case, the U.S. forces spotted four companies of North Koreans wading through the Nam River. They called on the 64th FAB to blunt the penetration. The indirect fire killed approximately 75% of the attacking force. Air strikes then machine-gunned the remainder. Later in the day, the NKPA again attempted to ford the river at the same spot. Artillery fire inflicted approximately 200 casualties on this force.⁴⁴ However, the enemy was able to cross at other locations undetected and by September 1st, the 35th Regiment was surrounded by elements of two North Korean Divisions, the 6th and 7th. This was precisely the situation that in July had caused American units to fold up and retreat in panic. However, the 35th earned its nickname "The Rock of the Nam" by holding its positions and counterattacking. In another shift from earlier engagements, Kean, commanding the 25th Infantry Division, took decisive action to protect his DivArty. When the enemy by passed the 35th Infantry, they threatened the artillery support. Kean requested that Eighth Army

⁴⁴ Ibid.

⁴⁵ Appleman. *South to the Naktong North to the Yalu*: 470

Headquarters release the 27th Infantry from the reserve to deal with this threat. Walker only authorized letting two of the three battalions attack. Kean, believing that Walker did not know how serious the situation was, sent the whole regiment. Walker later approved Kean's action when he knew the all the facts.⁴⁶ Kean's decisive action preserved his fire support assets. These assets, along with close air support, checked the Communist's advance. The 25th DivArty estimated that it killed over 1800 enemy soldiers in the defense of Masan.

The other major threat to the U.S. forces emerged in the 2^d Infantry Division's zone. The 2^d Infantry Division had replaced the 24th Infantry Division on the line and was defending the Naktong Bulge. The North Koreans committed a two-division attack in this sector with 21,000 soldiers and a large amount of their remaining artillery.⁴⁷ The enemy attack included a two hour-long artillery preparation on American positions. Unfortunately for the Americans, they were attempting to launch a regimental probe with the 9th Infantry west across the Naktong as the North Koreans attacked. The American regiment was scattered and separated as it ran into the enemy coming east. The U.S. soldiers fought valiantly and there were six Medals of Honor awarded in this battle. However, the North Koreans drove through the middle of the 2^d Infantry Division, re-capturing Obong-ni and Cloverleaf ridges. This split the division and left remnants of the 9th Infantry in the south and two regiments in the north.

The two northern regiments were the thinly spread veteran 23^d and the newly arrived 38th Infantry. The regiments' battle initially took the form of isolated battalion and company sized firefights. Every man was thrown into the fight. At one point COL Peplow, the 38th Infantry Regiment's Commander, had to personally establish the defense of his command post against a 300 man North Korean attack. The Americans did not have the luxury of the continuous front that gave them the advantage in August. An example of how this limited the fire support effort occurred in the 38th Regiment's defense of its Headquarters. Peplow requested a bombing strike in

⁴⁶ Ibid.; 472

⁴⁷ Blair. *The Forgotten War: America in Korea 1950-53*. 247

support of his defense. It was denied due to the proximity and intermixing of friendly and enemy troops. However, he did receive aerial rocket and machine gun support.⁴⁸

Most NKPA pressure fell against the 23d Infantry. This successful regiment was unfazed by the enemy tactic of infiltration to cut the roads behind their positions. They held their ground and choked off the North Korean 2^d Division's attack. Eventually they consolidated their units and established a regimental blocking position. This enabled the Air Force to assail the enemy while the ground forces had a clear perimeter. With this strong close air support, the 23^d caused more than 5,000 enemy casualties and destroyed the NKPA 2^d Division. However, the 23^d Regiment itself suffered almost forty percent casualties in return.⁴⁹

The results of the assault on the Naktong Bulge left Walker in a quandary. His army units had halted the enemy penetration, but were too weak to push them back. Once again, Walker's only reserve was the Marine Brigade. However, they were already moving to Pusan to embark on ships for Japan. Once there, MacArthur's planners had slated them for a key role in the landing at Inchon. Walker understood this, but called Tokyo and asked permission to use the Marines to again re-capture the Naktong bulge. MacArthur approved Walker's request, extending the deadline for their return to Japan.

The Marine attack focused on the raw North Korean 9th Division. Utilizing similar tactics to those they used a month before in the TF Kean attack, the Marines employed their supporting field artillery and close air support skillfully. In two days, with help from the Army's 9th Regiment, the Marines defeated the North Korean division and re took Obong-ni and Cloverleaf ridges. That night the Marines packed up and began moving to Pusan to board ships for Japan.

Throughout the North Korean attack and American counter attack, the FEAF air support continued to improve its accuracy and lethality. At times planes attacked the enemy near the

⁴⁸ Appleman. *South to the Naktong North to the Yalu*: 467

⁴⁹ Blair. *The Forgotten War: America in Korea 1950-53*. 250

crest of a ridge only a few feet from U.S. soldiers on the other side. The FEAF flew over one hundred sorties on September 1st in support of the 25th Division and more on September 2^d. The navy also contributed as the two carriers of TF 77 closed from their station in the north from which they had been flying air interdiction strikes, to a position closer to the battlefield. They added over 200 sorties, split between the 25th and 2^d Divisions. The Marines also pitched in with close support attacks from their Corsairs. This immense air effort was Walker's ace in the hole, allowing him to rapidly shift combat power to the most threatened point on the perimeter. After supporting the U.S. 25th and 2^d divisions during the first three days of September, the air focus shifted to helping the ROK army on the east coast. During the 4th, 5th, and 6th of September, the FEAF flew 394 sorties in the ROK sector. This effort reached a crescendo on September 11th when airpower provided 683 sorties distributed along the perimeter. Battlefield damage assessments estimated the North Korean casualties at over 1500 soldiers in just the U.S. 2^d Infantry Division area alone.⁵⁰ Fires played a decisive role in the destruction of the NKPA's last chance to seize Pusan.

Although the Eighth Army staff did not realize it at the time, the departure of the Marines signaled the end of the days of desperation on the Nam and Naktong rivers. Although there were still on going North Korean attacks, especially in the northeast sector held by the ROK army, the threat to Pusan itself was not as serious. Eighth Army's defense had held. MacArthur's attack on Inchon could proceed and finish the destruction of the NKPA by cutting their supply lines.

⁵⁰ Jackson, *Air War over Korea*: 42-43.

Chapter 4

DOCTRINE, TRAINING, LEADERS, ORGANIZATIONS, MATERIAL and SOLDIERS

The structure of the force deployed to Korea in 1950 ordained many of the shortfalls and successes displayed in the Pusan defense. Leaders should use the lessons learned from that force to shape the current and future U.S. military. The Army has divided the process of shaping the force into six areas: doctrine, training, leaders, organizations, material and soldiers. (DTLOMS)⁵¹ The Pusan battle has lessons for each of these areas.

Eighth Army was decisive as part of MacArthur's overall plan for a mobile defense. Perhaps the value of Walker's defense to current doctrine is best reflected by the choice of the Pusan Campaign to represent decisive defensive operations in FM 3-0. The manual describes an area defense as:

...A type of defensive operation that concentrates on denying enemy forces access to designated terrain for a specific time rather than destroying the enemy outright. The bulk of defending forces combine static defensive positions, engagement areas, and small, mobile reserves to retain ground. Keys to successful area defenses include effective and flexible control, synchronization, and distribution of fires into engagement areas. Area defenses employ security forces on likely enemy avenues of approach. Commanders employ a reserve with priority to the counterattack. Other potential reserve missions include blocking enemy penetrations and reinforcing other portions of the defense. Area defenses can also be part of a larger mobile defense.⁵²

Walker's plan and execution of it illustrates this definition perfectly. However, in contrast to the Pusan perimeter's value to current doctrine, contemporary doctrine gave little assistance to the soldiers of 1950.

After World War II, the American Army immediately convened a conference of artillerymen in Augsburg, Germany to discuss the lessons learned from the European Theater of

⁵¹ United States. U.S. Army Command and General Staff College. Resource Planning and Force Management (Fort Leavenworth, Kansas): 4-2

Operations (ETO). The consensus from this conference was that World War II had validated U.S. Army doctrine, and the only change required was for more and bigger guns. The cannoneers recommended increasing the number of guns in a battery from four to six, and adding 155mm howitzer battalions to the DivArty. However, the Army took little action between the conference and the Korean War on even these minor changes. They also ignored any lessons learned in the Pacific Theater. The campaigns against the Japanese in World War II had many similarities with the Pusan defense. These included an enemy that preferred encircling tactics; extremely close support of American infantry, constricted terrain and frontages, and the need for organic perimeter defense by individual batteries.⁵³ Institutionalizing the lessons from the Pacific could have saved lives and guns in the Pusan Perimeter fights. However, there was little motivation to do this. As Boyd Dastrup described the period:

Ambivalence characterized the field artillery late in the 1940s. Field Artillery officers saw no real reason to modify doctrine because of the successes of World War II and moved methodically to introduce new weapons. After all, during the late 1940s, most Americans, including many field artillery officers, questioned the role of ground forces in the atomic age and envisioned airpower as the key in defending the country. This made the army and the artillery irrelevant.⁵⁴

The critical importance of fire support in August of 1950 shook up the stagnant doctrine in two areas – force protection and joint fires. The 24th Division's DivArty Commander, Brigadier General George Barth defined two major changes for force protection. The first was the requirement for gun crews to defend their pieces and the second for infantry and armor commanders to plan to come to the artillery's assistance if heavily engaged. While these were lessons learned during World War II in the Pacific theater, the Army did not espouse them in the post war doctrine anticipating a linear war in Europe against the Soviet Union. Thus, commanders relied on a continuous line of infantry and armor units to provide force protection for the artillery. Pusan proved them wrong. Even after the U.S. forces withdrew behind the Naktong and Nam

⁵² Field Manual 3-0, *Operations*: 8-10

⁵³ Dastrup *The Field Artillery: History and Sourcebook*. 226-236

⁵⁴: Ibid. 251

rivers, there were not enough soldiers to establish a solid line of defense. North Korean soldiers managed to infiltrate the American front and wreck havoc in the rear areas. As Barth stated, the counter for this was two fold. First was the artillery's responsibility to train soldiers on how to defend themselves against a small threat. An example of this type of action occurred on September 2^d, 1950 in the A Battery, 64th FAB perimeter. In a night defense of their position, the cannon crews killed twenty one North Korean soldiers at a cost of seven dead and twelve wounded Americans⁵⁵. While not a textbook defense, the action allowed the battery to resume fire missions after driving off the enemy. The other responsibility was for the maneuver commander to assess the potential for large threats against his rear area and the need to position adequate infantry and armor elements to defend these high value targets. The 23^d Infantry's mission in the Bowling Alley was an exemplary example of this. The destruction of the 555th FAB in Task Force Kean's attack illustrated the result when the commander ignored this assessment or performed it incorrectly.

The description of noncontiguous areas of operation in the Army's proposed manual, FM 3-0, Operations, ably addresses the changes observed between the ETO and the Pusan perimeter. It strengthens the argument for rear area security by directly addressing it in the context of shaping operations for the defense. According to the manual, "They [security forces] harass and slow the enemy to gain time and space for shaping enemy actions and protecting lines of communication, headquarters, fire support units, and reserves."⁵⁶ The Eighth Army's Division and Regimental Commanders learned this lesson well in August 1950. Unfortunately, the enemy, not doctrine, was their instructor.

Aspects of current and emerging Army doctrine reflect the lessons learned from the defense of Pusan about joint fires. FM 3-0 clearly reflects how Americans like to fight when it states "Firepower provides the destructive force essential to defeating the enemy's ability and will

⁵⁵Russell Gugeler, "The Defense of a Battery Position," *Combat Forces Journal* (June, 1954): 34-37

to fight. Firepower and maneuver are complementary dynamics.’’⁵⁷ To achieve this effect, current doctrine emphasizes joint operations. It articulates the need for a system able to control air support to army ground forces like the one that evolved on the Korean peninsula in the summer of 1950.⁵⁸ World War II taught the Army and Air Force this lesson. However, they entombed it in their doctrine without exercising it in the field. At the start of the war, the only Army or Air Force units with the requisite communications equipment for an air – ground system were in the continental U.S. Thus, the doctrine had no value to the troops deployed in June and July 1950. However, by the time Eighth Army established the perimeter, the Air Force, with Army assistance, had set up a fully functioning Joint Operations Center (JOC) capable of handling the fight in the close area. The JOC prioritized and coordinated available air power. This occurred simultaneously with a resurgence of the World War II system of Air Force pilots serving with Army units on the ground as well as forward air controllers operating light planes over the frontline. This coordination between the ground and airborne pilots pinpointed the enemy for the faster attack planes, greatly improving the effectiveness of air support⁵⁹. Only then did doctrine have value for the soldiers defending the banks of the Naktong.

Contemporary doctrine directs that the United States military must establish this system before battle. At the lowest level, this takes the form of Air Liaison Officers serving with units down to the battalion task force level. These Air Force pilots are attached to the battalion task forces in peacetime exercises in order to prevent the “on the job training” experienced by units on the Pusan Perimeter. The system further extends training on calling for close air support to Army forward observers down to the platoon level.

⁵⁶ United States. Headquarters, Department of the Army Field Manual 3-0. Operations (Washington, DC: June 2000), 4-5

⁵⁷ Ibid. 8-12

⁵⁸ United States. Headquarters, Department of the Army Field Manual 100-7. Decisive Force (Washington, DC: May 1995): 5-3

⁵⁹ Michael Dolan “Mosquito and Horsefly” *Combat Forces Journal* (February 1952): 35

The goal of doctrinally integrating Army and Air Force systems is to replicate for Army units the effects received by the 5th Marine Regiment of 1st Provisional Marine Brigade from the 33d Marine Air Group. Army commanders during Pusan were envious of the Marines' close support abilities. As Paul Freeman, Commander of the 23d Regiment stated, " ...they [the Marines] had squadrons of air in direct support. They used it like artillery. It was, 'Hey Joe, this is Smitty. Knock the left off that ridge in front of Item Company.' They had it day and night."⁶⁰ However, the Army will never achieve this level of support. The primary reason for this is that the Marine Air is dedicated solely to the support of its ground unit and is designed to replace artillery in the early stages of an amphibious landing. It is too expensive to dedicate that size Air Force asset permanently to an Army regiment. The requirement to provide defense against enemy air exacerbates this cost. The Pusan Perimeter fight occurred when the communists had no effective way to challenge American airplanes so very little airpower was required to preserve air supremacy. The situation in Korea today, and in many locations around the world, is very different. Thus, while recognizing the importance air support will play in the future, doctrine should not over emphasize reliance upon it.

Compounding the problem of stagnant doctrine, fire support training was inadequate before the Korean War. No one in Japan, including the gunners, anticipated going to war. There was limited artillery specific training, and even less as a combined arms team.⁶¹ Units arriving from the U.S. fared little better. Although they were promised training time, the urgency of the Pusan fight meant that Walker threw them into the battle directly after their arrival in the theater. In short, the lack of sweat in peacetime resulted in blood shed in war. Despite this lack of preparation, the most successful commanders were the ones who learned to maximize and value what the fire support system could provide for them. Regimental Commanders like Michaelis and Freeman understood that fires could not replace movement, but that they could facilitate it.

⁶⁰ Docker, "Marine Air Over Korea": 41

⁶¹ Barnett, "Breechblocks Painted Bright Red Task Force Smith in Korea", 31

Unfortunately, they were trained in World War II and the crucible of the Pusan Perimeter, not in peacetime exercises.

Lacking a war, current leaders learn fire support lessons from simulations. There are two major sources for this training – computer simulations like JANUS and the Battle Command Training Program and the “dirt” training centers at Fort Irwin California, Fort Polk Louisiana, and Hohenfels, Germany. Both have their problems.⁶² Computers make some things that were hard in Korea in 1950 easy. Communication means walking to the next room. Movement requires just the click of the mouse. Commanders obtain an Olympian view of the battlefield. The computer plays air support off the screen. This tends to make fire support appear easy. Meanwhile, at the training centers, the fire support effort struggles with friction when it replaces bytes with bodies. One system implies that fires are too easy, one that they are not effective. Both training lessons are incorrect. There is no easy answer to this dilemma. Enforcing realistic standards during simulations for communications, ammunition, and other friction inducing elements will assist in making fires more realistic. Fire supporters need to drag their infantry and armor brethren to witness live fire exercises during home station training in order to impress on them the shock effect that is very difficult to portray at the dirt training centers. However, the most important Pusan lesson was the need to realize that wars are not scheduled. Soldiers and statesmen no more expected Korea than they anticipated the Gulf War. With this assumption as a guide, commanders should ensure that they exercise all aspects of the combined arms system regularly. Because of the Marines unique structure, they benefited from this discipline in 1950 with quality fire support. Army and Air Force units, focused on service specific missions, did not. Finally, commanders should not let the argument over the relative value of fire support stand in the way of integrating training with it. Pusan shows that fires are the American asymmetrical advantage. Only regular joint and combined arms training will keep it that way.

⁶² Gary H. Cheek, “Training for the NTC” *Field Artillery Journal* (March-April 2000): 10

Fire Support is a leader intensive process. The key leaders involved in the system include the supported unit commanders and the commanders of the artillery and Air Force units as well. Effective fire support can only happen if there is a partnership between these leaders. At the highest level, MacArthur and Stratemeyer represented this partnership. They made decisions allocating what percentage of air power was dedicated to close air support or to air interdiction and other missions. The failed B-29 raid of August 16th was their decision as was the decision to not repeat it. One level down was the partnership between Lieutenant General Walton Walker and USAF Major General Earle Partridge. They also established an effective partnership, with daily meetings in the evenings to determine the next day's targets and the status of sorties allocated by the theater commander. Below the Eighth Army level, tactical commanders from division to task force unit displayed varying levels of competence and teamwork between the supported unit and its artillery and Air Force elements. Marine Brigadier General Craig's request to delay his brigade's attack until air support was in place during the second Battle of the Naktong Bulge displayed superior understanding of the synergy required between movement and fires. The decision to limit the shaping fires to air delivered ones in the same battle was an error because it limited the synergistic effects of massing all available fires in support of the infantry and armor forces. Mistakes were not limited to maneuver commanders. Brigadier General Loyal Haynes, the 2^d Infantry Division DivArty Commander, was incompetent when assigned to command the division's northern shoulder in the same battle⁶³. At the lowest level, leaders technical proficiency suffered from the General Dever's 1947 decision to make artillery officers "ground officers first, and gunners second".⁶⁴

The leaders in the Pusan Perimeter commanded organizations remarkably similar to those of today's Army. The divisions each had an assigned DivArty whose size depended on the number of regiments in the unit. Although the conglomerations of Infantry and Armor battalions

⁶³ Blair. *The Forgotten War: America in Korea 1950-53*. 249

⁶⁴ Dastrup. *The Field Artillery: History and Sourcebook*. 246

were called regiments, they were about the same size and performed the same missions as today's Brigade Combat Teams. Like the regiments, current brigades are usually supported by at least a battalion of artillery with one or more battalions reinforcing its fires. The battalions are comprised of three firing batteries. They also have air liaison officers to handle close air support. In short, very little has changed organizationally at the division level since MacArthur's reinforcements filled the artillery to its designed strength in August 1950.

The major difference between the Pusan Perimeter fight and how the current U.S. Army organizes units to fight is at the corps level. In the ETO in World War II, the United States subdivided its field armies into corps. These corps' each had a number of artillery battalions assigned to it with a corps artillery headquarters to control them. This headquarter's function was to coordinate artillery support in the corps area as well as to shape the fight for the divisions with fires in the deep area of the battle. This is how the contemporary U.S. Army intends to fight a conventional war. However, during the Pusan campaign, Eighth Army controlled all the tactical regiments and divisions assigned to it. There were no intermediate Corps Headquarters and thus no Corps Artillery Headquarters. The harried process of reinforcement during August 1950 precluded establishing these headquarters. This meant that artillery units were sometimes fragmented or hurriedly re-assigned to support other units, losing the force multiplier received through habitual relationships with the other combat arms. Walker remedied this situation in September 1950 just before the breakout from the perimeter by establishing IX and I Corps. Thus, the organizational example of Pusan was an aberration. It is useful as an example of making do, but not as a systematic way to ensure the most effective fire support possible.

Material also shaped the battle in August 1950. Although obsolescent by today's standards, the relative quality and technology levels of the two sides are instructive for the current force. The American artillery outranged the North Koreans. The enemy had no system comparable to the American air support. They also had no equivalent to the USN carriers that could concentrate air delivered firepower on either coast of the peninsula. By the beginning of

August, the U.S. forces had eliminated the North Koreans sole technological advantage as they fielded medium tanks; 3.5 inch improved bazookas, 75mm recoilless rifles, and used air and artillery fire to destroy the initially invulnerable T-34 tank. However, technology was a two edged sword. It is expensive to outfit a technology-based force. During the years of Harry Truman's budget cuts, the Army could not afford to adequately fill its units in Japan with the best weapons and the small enablers that tied these systems together to create an overmatch with the enemy. As mentioned above, there were not enough radios to coordinate air support. Other radios designed to relay calls for fire from a forward observer to the artillery fire direction center were obsolete and often failed.⁶⁵ The howitzers deployed from Japan to Korea were so worn that they were unsafe to shoot over the heads of friendly troops. In short, the low technology NKPA almost defeated the high technology American military because of Harry Truman's mistaken focus on dollars as the only measurement of military cost and because of the inability to see the force as a system in which any missing part can seriously degrade the whole. As the 555th FAB found out, the best close air support in the world is much less effective if the unit on the ground cannot talk to the pilot.

Today's military faces the same dilemma. By modern standards, the technology used in the Pusan defense was antiquated. Yet this low technology level lent itself to degraded operations such as using wire and World War I field phones to replace radios. Today's force should consider this lesson and examine the consequences of technology failure.

Along with reduced organizations and poor material, the Army also suffered from a lack of soldiers in the summer of 1950. Eighth Army urgently needed replacements to replace combat losses. The low percentage of fill for units in Japan at the start of the war exacerbated this requirement. In response, the Army stripped units in the Continental U.S.⁶⁶ These soldiers arrived

⁶⁵ Terry *The Battle for Pusan: a Korean War Memoir*: 28

⁶⁶ Ibid. 127

in Korea as individual replacements. This policy hindered unit cohesion and prolonged the development of combat hardened units.

The Chief of Staff of the Army's recent decision to fill divisions in lieu of support units has avoided a potential repeat of this same situation. President Truman's budget cuts lowered the level of manpower available to the Army in the late 1940s. Similarly, the post cold war reduction forced the combat unit's percentage of fill slowly downward. While every job in the Army is important, Pusan demonstrated that when the campaign begins, the most important jobs to fill are combat units. Soldiers are the glue that enables the other DTLOMS functions. Without soldiers, doctrine is unachievable, training is ignored, leaders are unavailable, organizations go unfilled, and material is unmanned. Achieving this before the fight is critical to ensuring that those units are cohesive and combat ready before the battle.

CONCLUSION

The Pusan campaign began with a fire support system cobbled together from a patchwork of under strength, poorly trained and equipped units who were unfamiliar with what ground commanders needed for effective support. American commanders were also unfamiliar with the North Korean enemy, the terrain, and each other. The campaign followed on the heels of one of the most psychologically damaging defeats in ground warfare ever suffered by the United States when the NKPA hounded the 24th Infantry Division down the Korean peninsula in June and July of 1950. The American feeling of invulnerability left over from World War II compounded the sense of bewilderment caused by this disaster. In short, there was little in the war prior to August 1950 that would make Walker, his superiors, or subordinates, believe that the Americans were facing anything but a Dunkirk like situation. Walker's first action, the attack by TF Kean, seemed to only confirm this picture.

During the campaign, the fire support system matured under pressure. It was assisted by many factors. These factors included terrain that degraded some of the NKPA's encircling tactics and provided a clearly defined front line, the air interdiction effort that choked off supply lines, and, most importantly, a re-supply effort that was never enough to ensure an easy victory, but was sufficient to hold the line. The lines of communication leading to Pusan harbor from Japan and the United States brought not only the quantity of supplies that established favorable force ratios, but also the quality weapons that negated the North Korean tank advantage. This re-supply effort allowed the American forces to prosecute the war the way they wanted to - with plenty of firepower. Tactical commanders like Edward Craig, Mike Michaelis, and Paul Freeman discovered the key to holding the terrain around Pusan in battles with picturesque names like the Bowling Alley, Fox Hill, and Cloverleaf. This key was to defend the corridors leading to Pusan with an integrated defense that served as a barrier protecting the rear areas while artillery and air delivered fires slaughtered the attacking enemy. By blocking the enemy from encircling the main defense, successful commanders in effect forced the NKPA to attack down barrel of a gun. These same commanders figured out that a successful offense against an ideologically motivated opponent required an effective shaping operation before the first infantryman moved out. In the end, this re-discovery of the favorite American way of war, firepower, prevented the NKPA from consolidating its hold on South Korea and opened the way for MacArthur's decapitating maneuver at Inchon.

There is no doubt that fire support effectively aided the Eighth Army forces in defending the Pusan perimeter. Although artillery and aerial support imposed additional requirements on the supported infantry and armor commanders, especially for force protection and coordination, their contributions far outweighed these limitations. Fires forced changes to the previously successful North Korean tactics. As a captured enemy document showed, the NKPA leaders realized what the altered battlefield meant. The commander of the North Korean 6th Division, in a directive dated 24 August 1950, wrote:

Our experience in night combat up to now shows that we can operate only four to five hours in the dark, once we start night attacks between 2300 and 2400 hours and, therefore, if the battle continues until dawn we are likely to suffer losses. From now on use daylight hours for combat preparations and commence the attack, soon after sunset. Concentrate your battle actions mostly at night and thereby capture enemy base positions.⁶⁷

Fires cost the enemy the ability to operate in the day, and coordinated illumination limited his attacks at night. Before the U.S. fire support system was developed, the American defense was unable to stop the North Koreans. Once it became effective roles reversed and the NKPA soldiers died proving the ineffectiveness of operations without fire support.

Despite the decisive effectiveness of fire support in the Pusan perimeter defense, there were areas of weakness, especially at the start of the battle. At the strategic level, President Harry Truman's budgets failed to fund the military to effectively train and equip for the challenges of the cold war. This funding shortfall combined with a poor threat analysis by the Far East Command to discourage the Army and the Air Force from training together for the close support mission. Because of their unique mission and organization, the Marines avoided this mistake. Division and regimental commanders, stymied by the lack of funds and focus, also failed to conduct realistic combined arms training. Small unit leaders and their soldiers accepted the sentiment of the times that discounted the threat of war and felt that nuclear capable bomber crews would wage it if it did occur. In short, by discounting the value of the infantryman to national defense, the system failed to prepare to support him. Fire support was a very visible and important part of this failure.

Given this low level of preparedness, the gains made in fire support August 1950 in Korea were apparently astounding. However, what they really reflected was a return to the basics. The U.S. military exited, but did not enter the campaign, valuing integrated fires, force protection, and the need to fight in an effective joint manner. It is an important step that the combined arms

⁶⁷ *Research Supplement Interrogation Report Number 106 North Korean Artillery*, U.S. Army Military History General Headquarters Far East Command, 19 November 1951: 14; available from <http://carlisle-www.army.mil/cgi-bin/usamhi/dl/showdoc.pl?docnum=720>; Internet; accessed 19 October 2000.

approach continues within the U.S. Army, as symbolized by the infantry blue, armor yellow, and artillery red background on the patches of the U.S. Army Combat Training Centers. However, this is not enough. If the United States military wishes to replicate Walker's success without experiencing Eighth Army's growing pains, then it must follow its own doctrine and be able "to act as part of a fully interoperable and integrated joint force."⁶⁸ This not only means training infantry, armor, and artillery as a team but also including the sister services, particularly the Air Force. Until this is accomplished, fire support cannot support the infantry and armor to its fullest capability and soldiers, like their Eighth Army forbears, will pay the price.

⁶⁸ Field Manual 3-0, *Operations*: 1-10

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